

### **REMARKS**

By this Amendment, Applicant amends claims 9, 17, 20, and 28, and adds new claims 29 and 30. Support for the claim amendments and new claims is found in Applicant's specification at, for example, page 29, lines 4-17, page 31, line 15, to page 32, line 23, and Figures 9A, 9B, 10, and 11. Claims 9, 17, 20, and 28-30 are now pending in this application.

In the Office Action<sup>1</sup>, the Examiner rejected claims 9, 17, 20, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Yasui et al. (U.S. Patent No. 6,320,580). Applicant respectfully traverses the rejection for at least the following reasons.

"The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements." M.P.E.P. § 2142, 8th Ed., Rev. 7 (July 2008) (internal citation and inner quotation omitted). "[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P. § 2141(II). In rejecting a claim, "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

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<sup>1</sup> The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

Independent claim 9, as amended, recites an image processing device comprising a processor for, among other things, nullifying “a transparency value . . . where: the two or more of the plurality of gradation polygons are larger than corresponding ones of the shadow models, the corresponding ones of the shadow models do not overlap each other, and the two or more of the plurality of gradation polygons that correspond to the ones of the shadow models overlap.” That is, for example, as shown in Applicant’s Figure 9A, a transparency value is nullified where: (1) gradation polygons 260A and 260B are larger than shadow models 252A and 252B, (2) shadow models 252A and 252B do not overlap (i.e., area BB), and (3) gradation polygons 260A and 260B do overlap.<sup>2</sup> Yasui does not teach or suggest at least this subject matter, as recited in claim 9.

Yasui discloses “a computer-aid image processing apparatus . . . capable of efficiently performing a computation for processing of a plurality of polygons and a computation for a hidden-surface process in a rendering process.” Col. 1, lines 6-11.

As part of the process, Yasui discloses:

The overall process of the flowchart in FIG. 30 detects shadow polygons positioned between an opaque polygon and the view point or an infinite point for each shadow volume and performs, when detected, through an exclusive OR operation, odd-even inversion of the odd number or even number of the shadow mask data (area mask data) which represents if the number of the detected shadow polygons is odd or even. This process is repeated for all the shadow volumes, and shadow mask data in the area mask register, generated for the respective shadow volumes, are

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<sup>2</sup> In making reference to the specification and drawings set forth herein, it is to be understood that Applicant is in no way intending to limit the scope of the claims to the exemplary embodiments shown in the drawings and described in the specification. Rather, Applicant expressly affirms that it is entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation and applicable case law.

processed in the OR operation section 538, yielding synthesized shadow mask data, which is in turn supplied to the rendering section.

Yasui, col. 28, lines 35-47.

Yasui further discloses:

[A]rea masks (shadow masks) are generated in association with the individual shadow volumes. When processing the polygons of all the shadow volumes is completed (S107), the mask controller 53 causes the OR operation section 538 to compute a logical sum of the mask data in the area mask register 534 for the IDs of the shadow volumes, generating a synthesized shadow mask 408, and sends the synthesized shadow mask 408 to the rendering section 62 (S108 and FIG. 45). As a result of the OR operation of the area mask 404 in FIG. 31 and the area mask 407 in FIG. 32, an area mask 408 in FIG. 33 is generated. A shadow area (effective area of the shadow mask) which is produced by different shadow volumes is also a shadow area even when it is an overlapping area.

Yasui, col. 30, lines 26-40.

Although Yasui discloses using an OR operation to arrive at shadow mask data, Yasui does not disclose or suggest nullifying a transparency value where: (1) two or more gradation polygons are larger than corresponding shadow models, (2) the corresponding shadow models do not overlap each other, and (3) the two or more gradation polygons that correspond to the shadow models overlap. Yasui does not teach nullifying a transparency value, for example, as shown in Applicant's Figure 9A, where: (1) gradation polygons 260A and 260B are larger than shadow models 252A and 252B, (2) shadow models 252A and 252B do not overlap (i.e., area BB), and (3) gradation polygons 260A and 260B do overlap. Accordingly, Yasui does not disclose or suggest nullifying "a transparency value . . . where: the two or more of the plurality of gradation polygons are larger than corresponding ones of the shadow models, the

corresponding ones of the shadow models do not overlap each other, and the two or more of the plurality of gradation polygons that correspond to the ones of the shadow models overlap," as recited in amended independent claim 9.

For at least the above reasons, Yasui does not teach or suggest each and every element of independent claim 9. Moreover, the Office Action has cited no factors that would have motivated one of ordinary skill in the art to modify the disclosure thereof to achieve the claimed combination. The Office Action has consequently neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 9 and the Examiner should withdraw the rejection of the claim under 35 U.S.C. § 103(a).

Independent claims 17, 20, and 28, although of a different scope, include recitations similar to those discussed above in connection with independent claim 9 and are not rendered obvious by Yasui for at least similar reasons. Therefore, the Examiner should also withdraw the rejection of claims 17, 20, and 28 under 35 U.S.C. § 103(a) for at least the reasons given above.

New claims 29 and 30 depend from independent claims 17 and 28, respectively, and are allowable over Yasui at least due to their dependence.

**CONCLUSION**

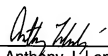
In view of the foregoing remarks, Applicant requests the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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